

## A REVISION OF *XYLOSMA* G. FORSTER (FLACOURTIACEAE) IN AUSTRALIA

by L. W. Jessup

Queensland Herbarium, Brisbane

### Summary

Four species of *Xylosma* occur in Australia, all are endemic. The name *X. ovatum* Benth. has been misapplied to one Lord Howe Island species. *X. parvifolium* from Lord Howe Island is described as new.

Four species of *Xylosma* occur in Australia. Two species are endemic on the mainland and two on Lord Howe Island.

Differences in the flowers and fruit among species of *Xylosma* are often slight. This has previously been pointed out by Sleumer (1974) who also observed that vegetative characters "... seem to be surprisingly constant ...". A key to 19 species recognised in the Flora treatment of the genus for New Caledonia by Lescot (1980), which is a modification of Sleumer's (1974) revision, relies heavily of vegetative features.

Until 1971 *X. ovatum* Benth. appears to have been known only from specimens collected by Banks and Solander, Cunningham (type) and Robert Brown. Examination of the type and recent collections including some by the author from the type locality has shown that specimens from Lord Howe Island have been incorrectly placed under *X. ovatum*.

Sleumer (1938) described a new species, *X. maidenii* from Lord Howe Island which was subsequently treated as a minor ecological variant within the bulk of the Lord Howe Island population (Sleumer, 1967).

Subsequent collections apparently confirm this view. Under the present circumstances the name *X. maidenii* must now be applied to the relatively more common large-leaved species on Lord Howe Island.

The population of small-leaved shrubs occurring on Mt Gower, Lord Howe Island known as *X. ovatum* Benth. var. *parvifolium* F. Muell. ex Sleumer is here treated as a distinct species.

Descriptions and illustrations of the two Lord Howe Island species are provided here. Descriptions and illustrations of the two mainland species are provided in Flora of Australia, Vol. 8.

- |   |                          |
|---|--------------------------|
| 1. Stamens up to 20; filaments up to 2.5 mm long. Petioles 0.4–0.7 (0.8) mm wide .....  | 2                        |
| Stamens 25–30; filaments 2.5–3 mm long. Petioles 0.7–1.5 mm wide .....  | 3                        |
| 2. Stamens ca 12; filaments ca 1.3 mm long. Sepals ciliate on margins. Leaves entire or with 5–10 teeth on each margin .....  | <b>X. ovatum</b>         |
| Stamens ca 20; filaments ca 2.5 mm long. Sepals ± glabrous on margins. Leaves with 2–4 teeth on each margin .....   | <b>X. parvifolium</b>    |
| 3. Leaves with 3–5 pairs of secondary veins, reticulate venation ± conspicuous; marginal glands at base of lamina scarcely more prominent than glands higher up, or absent; petioles (4) 5–8 (12) mm long ..... | <b>X. maidenii</b>       |
| Leaves with 5–10 pairs of secondary veins, reticulate venation inconspicuous; marginal glands at base of lamina only or much larger than any glands higher up; petioles 3–5 (7) mm long .....                   | <b>X. terrae-reginae</b> |

**Xylosma parvifolium** Jessup, species nova affinis *X. ovato* Benth. staminibus plus numerosis, filamentis longioribus, marginibus sepalis fere glabris, foliis parvis cum dentibus paucis et inflorescentiis masculis paucifloribus differt. **Holotypus:** Growing high up on the sides of Mt Gower, Lord Howe Island, 126 (collector incerta), flowers in January. MEL 582311 (MEL).

Frutex vel arbuscula ad 4 m alta. Ramuli puberuli, atrobrunnei; lenticellae numerosae rotundae, pallidae. Laminae rigidae chartaceae, glabrae, costa excepta, elliptico-obovatae (0.4) 0.7–1.2 (3) × (0.25) 0.45–0.8 (1.5) cm; apex obtusus vel rotundatus, vix acutus; basis acuta vel obtusa; margines serrato-dentatae, raro integrae; venae secundariae 2–4–jugae. Petioli puberuli (1) 2–2.5 (3) × 0.4–0.6 mm. Flores masculi: racemi axillares usque 3–flori vel flos solitarius et rhachim terminans. Rhachis et pedicelli sparse puberuli. Sepala 5, extra glabra, sparse intra puberula, anguste vel late obovata. Lobi disci crassi. Stamina circa 20; filamenta glabra circa 2.5 mm longa. Flores femineae et fructus non visi.

Synonym: *X. ovatum* Benth. var. *parvifolium* F. Muell. ex Sleumer, *Notizbl. Bot. Gart. Berlin-Dahlem* 14 (123): 297 (1938) **Type:** New South Wales and Queensland, F. Mueller, (B, holo, n.v.).

Shrub or small tree to 4 m, branchlets puberulent, dark brown with numerous round, pale lenticels. Leaves rigidly chartaceous, glabrous except the midvein, elliptic-obovate, lamina (0.4) 0.7–1.2 (3) × (0.25) 0.45–0.8 (1.5) cm, tip obtuse or rounded, scarcely acute, base acute or obtuse, margins serrate-dentate, rarely entire; secondary veins 2–4 pairs. Petioles puberulent, (1) 2–2.5 (3) × 0.4–0.6 mm. Male flowers in axillary racemes of up to 3 flowers or solitary and terminating the rachis. Rachis and pedicels sparsely puberulent. Sepals 5, glabrous outside sparsely puberulent inside, narrowly or broadly obovate. Disc lobes thick. Stamens c. 20; filaments glabrous c. 2.5 mm long. Female flowers and fruits not seen. **Fig. 1 C, D.**

**New South Wales:** Lord Howe Island; Mt Gower MEL 100641 (MEL); on mountains MEL 100642 (MEL); Near the summit of Mt Gower MEL 582308 (MEL); Fullgar MEL 582309 (MEL); Shrub or bush high up on Mt Gower, flowers in December, MEL 582310 (MEL), NSW 90185 (NSW); On S side of ridge above Goat House Cave, *J. Pickard* 1527 (NSW); Ridge on N end of Mt Gower below Get Up Place, 24 May 1971, *J. Pickard* s.n. (NSW); N ridge Mt Gower, *J. Pickard* 2637 (NSW).

Endemic to Lord Howe Island in high altitude low closed forests and thickets.

**Xylosma maidenii** Sleumer, *Notizbl. Bot. Gart. Berlin-Dahlem* 14 (123):294 (1938). **Type:** Lord Howe Island, 1888, (1898?) *J. H. Maiden* (B holo, n.v.).

Shrub or tree to 15 m, branchlets puberulent towards apex, soon glabrous, dark brown with numerous round, pale lenticels. Leaves rigidly chartaceous to coriaceous, glabrous, ovate, oblong-ovate or elliptical, lamina (3) 4–6 (10) × (1.5) 2–3 (6) cm, tip acute, shortly acuminate or obtuse, base obtuse or acute, always decurrent, margins entire or crenate-dentate; secondary veins 3–5 pairs, decurrent with midvein towards base. Petioles (4) 5–8 (12) × 0.7–1.2 (1.5) mm. Flowers in short, axillary or lateral, solitary or fasciated racemes. Rachises and pedicels glabrous or puberulent. Sepals 4 or 5, glabrous outside, pubescent inside and on margins, outer pair ovate, inner pair obovate-orbicular. Male flowers: disc lobes thick; stamens 25–30, filaments glabrous, 2.5–3 mm long. Female flowers: disc multilobed, lobes ± flat; staminodes 1 or 2 or absent. Ovary glabrous, ovoid-globose, tapering to 2(3) connate styles 0.5 mm long. Stigmas reniform or 2-lobed. Placentas 2, each with 2 ovules. Fruit globose — ovoid c. 5.7 mm diameter, 1 or 2-seeded. **Fig. 1 A, B.**

**New South Wales:** Lord Howe Island; N flank of Mt Lidgbird, near "Smoking Tree", *M.M.J. van Balgooy* 1069 (NSW); 17 May 1920, *J. L. Boorman* NSW 90184 (NSW), Dec 1936, *J. D. McComish* NSW 90181 (NSW); Jan 1937, *J. D. McComish* NSW 95772 (NSW); Feb 1937, *J. D. McComish* BRI 050568 (BRI), NSW 95777 (NSW); Mar 1937, *J. D. McComish* NSW 95773, 95774, 95775 (NSW); Dec 1938, *J. D. McComish* BRI 050567 (BRI); W side of Dawson Point Ridge, *J. Pickard* 3374 (NSW); N side of Intermediate Hill, *J. Pickard* 1346 & *A. Rodd* (NSW); S base of Malabar, c. 10 m above Neds Beach Road, *A. Rodd* 1700 (NSW).

Found "at the foot of the hills running through the centre of the island."

**Xylosma ovatum** Benth., *Fl. Austral.* 1:108 (1863); L. W. Jessup, *Fl. Australia* 8:72 (1982). **Type:** Rodds Bay, NE Australia, May 1819, *A. Cunningham* 306 (BM holo n.v., B iso n.v., K iso).

**Xylosma terrae-reginae** C. White & Sleumer in Sleumer, *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (114):477 (1935); L. W. Jessup, *Fl. Australia* 8:72 (1982). **Type:** Oakview, South Burnett District, July 1926, *F. Reynolds* s.n. (B holo n.v., BRI iso, MEL iso).

### Acknowledgements

I would like to thank Mr L. Pedley and Dr G. P. Guymer for their encouragement and advice. Mrs Gillian Rankin prepared the line drawings.

### References

- LESCOT, M. (1980). Flacourtiaceae. *Flore de la Nouvelle Calédonie et dépendances* Vol. 9. Museum National D'Histoire Naturelle, Paris.
- SLEUMER, H. (1938). Die malesisch-pacifischen *Xylosma*-Arten. *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14 (123):288–297.
- SLEUMER, H. (1967) Flacourtiaceae. Contributions New South Wales National Herbarium. Flora Series: No. 136, Supplement.
- SLEUMER, H. (1975). A concise revision of the Flacourtiaceae of New Caledonia and the Loyalty Islands. *Blumea* 22(1):123–147.

Accepted April 1982.



Fig. 1. *XYLOSMA*. *X. maidenii*: A. habit, with fruit ( $\times 1$ ). B. flower with one sepal removed ( $\times 6$ ). *X. parvifolium*: C. habit ( $\times 1$ ). D. flower ( $\times 6$ ).